

WHAT IS CLAIMED IS:

1 1. A method of operating a network node of a wireless telecommunication
2 network, the method comprising:

1 selecting a first coding scheme for encoding of a point-to-multipoint (PTM)
2 transmission carried to plural mobile stations on a common downlink channel;

3 monitoring information received on a common uplink channel for feedback
4 regarding link quality of the point-to-multipoint transmission carried to the plural
5 mobile stations on the common downlink channel;

6 using the feedback regarding link quality to determine whether to change from
7 the first coding scheme to a second coding scheme for the encoding of the point-to-
8 multipoint transmission to the plural mobile stations.

1 2. The method of claim 1, wherein the network node is a base station controller
2 node.

1 3. The method of claim 1, wherein the feedback received on the common
2 uplink channel from one of the plural mobile stations includes a signal indicative of a
3 complaint regarding link quality, and wherein upon detecting the signal indicative of a
4 complaint on the common uplink channel, choosing a more robust coding scheme as the
5 second coding scheme.

1 4. The method of claim 1, further comprising changing the encoding from the
2 first coding scheme to the second coding scheme when the feedback fails to provide
3 any complaint regarding link quality with a predetermined time interval, the second
4 coding scheme being a less robust coding scheme than the first coding scheme.

1 5. The method of claim 1, further comprising changing the encoding from the
2 first coding scheme to the second coding scheme only when the feedback includes an
3 indication that a sufficient number of the mobile stations are complaining regarding link
4 quality.

1 6. The method of claim 5, wherein the monitoring further comprises:

2 forming a reporting group from a specified number of plural time slots received
3 on the common uplink channel, one of the plural time slots of the group being randomly
4 associated with a mobile station which complains regarding link quality;

5 obtaining an estimate of a number of the mobile stations that are complaining
6 regarding link quality by ascertaining how many of the plural time slots in the reporting
7 group include a signal indicative of a complaint;

8 comparing the estimate to a predetermined trigger value.

1 7. The method of claim 6, further comprising changing from the first coding
2 scheme to the second coding scheme when the estimate equals or exceeds the
3 predetermined trigger value, the second coding scheme being a more robust coding
4 scheme than the first coding scheme.

1 8. The method of claim 1, wherein the common uplink channel is a random
2 access channel.

1 9. The method of claim 8, wherein the random access channel is a PRACH
2 channel.

1 10. A network node of a wireless telecommunication network, the node
2 comprising:

1 an encoder which encodes a point-to-multipoint transmission carried to plural
2 mobile stations on a common downlink channel;

3 a controller which monitors information received on a common uplink channel
4 for feedback regarding link quality of the point-to-multipoint transmission carried to the
5 plural mobile stations on the common downlink channel and which uses the feedback
6 regarding link quality to determine whether to change from a first coding scheme to a
7 second coding scheme for the encoding of the point-to-multipoint transmission to the
8 plural mobile stations.

1 11. The apparatus of claim 10, wherein the network node is a base station
2 controller node.

1 12. The apparatus of claim 10, wherein the feedback received on the common
2 uplink channel from one of the plural mobile stations includes a signal indicative of a
3 complaint regarding link quality, and wherein upon detecting the signal indicative of a

complaint on the common uplink channel, the control chooses a more robust coding scheme as the second coding scheme.

13. The apparatus of claim 10, wherein the controller changes the encoding from the first coding scheme to the second coding scheme when the feedback fails to provide any complaint regarding link quality with a predetermined time interval, the second coding scheme being a less robust coding scheme than the first coding scheme.

14. The apparatus of claim 10, wherein the controller changes the encoding from the first coding scheme to the second coding scheme only when the feedback includes an indication that a sufficient number of the mobile stations are complaining regarding link quality.

15. The apparatus of claim 14, wherein the controller:
forms a reporting group from a specified number of plural time slots received on the common uplink channel, one of the plural time slots of the group being randomly associated with a mobile station which complains regarding link quality;
obtains an estimate of a number of the mobile stations that are complaining regarding link quality by ascertaining how many of the plural time slots in the reporting group include a signal indicative of a complaint;
compares the estimate to a predetermined trigger value.

16. The apparatus of claim 15, wherein the controller changes the encoding from the first coding scheme to the second coding scheme when the estimate equals or exceeds the predetermined trigger value, the second coding scheme being a more robust coding scheme than the first coding scheme.

17. The apparatus of claim 10, wherein the common uplink channel is a random access channel.

18. The apparatus of claim 17, wherein the random access channel is a PRACH channel.

19. A mobile station configured to operate in a wireless telecommunication network, the mobile station comprising:

1 a receiver which receives from a network node an encoded point-to-multipoint
2 transmission carried on a common downlink channel;

3 a requestor which monitors link quality of the point-to-multipoint transmission
4 and which causes provision of feedback regarding the link quality of the point-to-
5 multipoint transmission on a common uplink channel to a network node.

1 20. The apparatus of claim 19, wherein the feedback provided on the common
2 uplink channel includes a signal indicative of a complaint regarding link quality.

1 21. The apparatus of claim 19, wherein the feedback provided on the common
2 uplink channel includes a signal indicative of a complaint regarding link quality in
3 hopes that encoding of the point-to-multipoint transmission will change to a more
4 robust coding scheme.

1 22. The apparatus of claim 19, wherein the feedback provided on the common
2 uplink channel fails to provide any complaint regarding link quality.
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4 23. The apparatus of claim 19, wherein no signal is provided on the common
5 uplink channel to indicate a lack of complaint regarding link quality in hopes that
6 encoding of the point-to-multipoint transmission will remain the same or change to a
7 less robust coding scheme.

1 24. The apparatus of claim 19, wherein the requestor determines in which time
2 slot of a reporting group of time slots a complaint regarding link quality is to be
3 provided as the feedback.

1 25. The apparatus of claim 19, wherein the requestor randomly determines in
2 which time slot of a reporting group of time slots a complaint regarding link quality is
3 to be provided as the feedback.

1 26. The apparatus of claim 19, wherein the common uplink channel is a random
2 access channel.

1 27. The apparatus of claim 25, wherein the random access channel is a PRACH
2 channel.

1 28. A mobile station configured to operate in a wireless telecommunication
2 network, the mobile station comprising:

1 means for receives from a network node an encoded point-to-multipoint
2 transmission carried on a common downlink channel;

3 means for monitoring link quality of the point-to-multipoint transmission; and

4 means for causing provision of feedback regarding the link quality of the point-
5 to-multipoint transmission on a common uplink channel to a network node.

1 29. The apparatus of claim 27, wherein the feedback provided on the common
2 uplink channel includes a signal indicative of a complaint regarding link quality.

1 30. The apparatus of claim 27, wherein the feedback provided on the common
2 uplink channel includes a signal indicative of a complaint regarding link quality in
3 hopes that encoding of the point-to-multipoint transmission will change to a more
4 robust coding scheme.

1 31. The apparatus of claim 27, wherein the feedback provided on the common
2 uplink channel fails to provide any complaint regarding link quality.

1 32. The apparatus of claim 27, wherein the controller determines in which time
2 slot of a reporting group of time slots a complaint regarding link quality is to be
3 provided as the feedback.

1 33. The apparatus of claim 27, wherein the controller randomly determines in
2 which time slot of a reporting group of time slots a complaint regarding link quality is
3 to be provided as the feedback.

1 34. The apparatus of claim 27, wherein the common uplink channel is a random
2 access channel.

1 35. The apparatus of claim 33, wherein the random access channel is a PRACH
2 channel.